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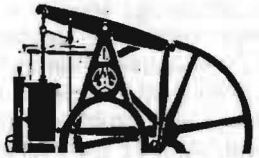
LATEST DATE FOR COPY FOR THE JANUARY NEWSLETTER IS 2nd DECEMBER 1995



SUSSEX INDUSTRIAL ARCHAEOLOGY SOCIETY

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CHIEF CONTENTS

ANNUAL GENERAL MEETING

The final activity remaining for this year is the AGM to be held on Saturday November 25 at Haywards Heath Town Hall, Boltro Road, at 2.30 p.m.
The business meeting and tea (ladies permitting) will be followed by a talk by John Norris, Curator of the Milne Electrical Museum at Amberley, who will give us an expanded version of his interesting and amusing short talk at SERIAC this year.

Contact R.G. Martin (01273 - 303805)

VISIT TO ROBERTSBRIDGE – 22 JULY 1995

... two dozen members and friends assembled in glorious summer weather at Robertsbridge Station.

The station is one of the fine series designed by the architect William Tress of Finsbury Square, for the South Eastern Railway's line from Tonbridge to Hastings. Opened in 1851 the station is of brick with semicircular window heads, pleasing proportions and remains largely unaltered except for the removal of the fenestrated chimney stacks. Protection of the passengers was provided by extending the single storey booking office roof and supporting the same on wooden (not cast iron) brackets. Examination of old photographs in the two Middleton Press books covering this station indicates that a two storey house for staff accommodation, nearest the road, opposite the signal cabin, had been demolished; but it would appear that the single storey booking office had been extended towards the road at some date, in an extremely fine imitation of the original style (can anyone confirm this?). The signal cabin is the only intermediate box now remaining between Tonbridge and Hastings.

In 1900 a branch to Tenterden (which started from a bay at Robertsbridge station) was constructed under the provisions of the Light Railway Act of 1896 by Colonel H.F. Stephens. After the first few years the line was never again financially viable, succumbing to closure in 1961. A preservation society was formed which now operates trains between Tenterden and Northiam. It's long term aim is to extend this service to Robertsbridge and Gerard Saunders of the preservation society detailed the up to date position; with most of the trackbed purchased and the line cleared from Robertsbridge station to the former A21. Before leaving the station site the 1851 goods shed was examined.

By walking a short distance down Station Road and then across a field the construction techniques of a light railway could be viewed with an overbridge, consisting of two girders between abutments (now looking the worse for wear) upon which the sleepers and tracks were directly laid.

Recrossing the field, plantations of willow were noted providing the raw material for cricket bats which have been made here since 1874 by Gray and Nicholls. Another manufactory, Newbury's, was visited housed in a Victorian Maize Mill in Station Road – not much remaining of its former activity other than the remains of a hand hoist. It was a pity that nobody was on hand to demonstrate the craftsmanship of the makers but perhaps here is an idea for a future visit.

After lunch the course of the light railway was followed, somewhat perilously at times, to the crossing of the former A21. From the other side of the road a siding diverged back across the road by means of another level crossing into Hodson's corn mill, a Victorian structure of the 1890s with the remains of a water turbine (not visible) in the wheel arch.

The final visit of the day was to the Museum of Rural Life situated in the High Street and unknown, at least to this scribe. Packed with many interesting artefacts the highlight was the re-erection of various one-time village shops and a garage charmingly explained by the curator who was brought up in one of them.

Another successful visit to a town most of us drive around and our thanks to Don Cox and Bill Crawshaw for arranging such an interesting day.

JSFB

MYSTERY TOUR OF MILLS 1995

On a sunny Saturday morning in August some 35 members gathered at Burton Mill for the start of the "Mystery Tour".

Burton Watermill is under renovation by the new owners who plan to restore the machinery to working condition. They have already converted the upper floors to living accommodation and the whole building is looking really spruce. The mill is on the site of an earlier forge mill which then served for grinding grain and then later generated electricity for Burton House. We were able to wander freely over both floors and to see the turbine which has superseded the two overshot wheels.

From here we made our way in separate cars to Duncton for the next step on our itinerary. Duncton Mill is in a superb setting and is fed directly by a stream from the Downs. It has not ground for some time but we found plenty of interest here not the least of which were the fish tanks at the lower level!

We then drove to Loxwood and parked in the field adjacent to the Onslow Arms. Here some of us had a pub lunch while others picnicked and enjoyed the sun after which a few explored the neighbouring arm of the Wey and Arun canal currently undergoing restoration. From our lunch spot we walked a short distance to Brewhurst Mill. This was refurbished early this century and again in 1928 it was modernised with the addition of a Blackstone oil engine. It continued in production until 1968 when commercial grinding ended. The mill finally closed in 1981.

Fourth on the itinerary was Rackham. The waterfall here was the Parham Estate Mill. It lost its water supply some time ago by a diversion of the spring which fed it. The building, however, is in good shape and we were able to explore all three floors.

And so, lastly, to High Salvington where, the itinerary declared, "Tea will be Served"! Indeed it was, and very welcome too, thanks to Peter Casebow and colleagues. The sweeps of this attractive post mill were turning for us and we were able to examine the restoration to date besides looking at the newly restored granary. Finally a well-deserved vote of thanks was given by our Chairman to Peter Pearce who once again efficiently organised a splendid tour. Our thanks also go to the owners of the mills for allowing us to inspect their properties. My acknowledgements go to Peter for the information in his itinerary notes, borrowed copiously for this article!

DIANA DURDEN

FROM GEORDIELAND TO AULD REEKIE – I.A. ON HOLIDAY

In mid-August the Durden family abandoned the south-east to its endless heat-wave and drought and made for northern parts.

From our two-day base in Newcastle (friends' house in Benwell, a western suburb, so we didn't get to see the Tyne bridges!) we sallied west to just beyond Hexham where rumour had it that there was a defunct smelt mill site.

We firstly went to the Post Office (which served as a T.I.C.) in Allendale, the nearest village, to obtain a leaflet about the site. Armed with this we began our walk which took us on a former carriers' way between two old flues, leading to the chimneys at the summit. The flues and chimneys were used in lead smelting in the nineteenth century. The flues were quite a remarkable landscape feature, being tunnels whose rounded roofs protruded above ground level. Every so often there were places where the roof had caved in, providing natural entrance points, and so, despite the leaflet's warning that it was "very unsafe" we all explored these short stretches of tunnel and happily made our way uphill popping in and out like rabbits in holes! Finally we reached the two chimneys – one in a more ruinous condition than the other, but both having kiln holes at their bases through which (of course!) we climbed and were able to look up through to the top which was open to the sky. The return walk was along the same route – no traces of a "depot" at the end of the flues could be found.

Our next base was a week's self-catering near Gairloch in Highland Region (To those born before 1971, this used to be Ross & Cromarty).

One day's outing was to drive east to Dingwall in search of a distillery! On the way we were delighted and surprised to come across a spa-town called Strathpeffer which had as one of

its tourist attractions a most attractively restored Victorian railway station. This had been put to good use – the platform buildings now house craft-shops, etc. and the line has been gravelled over and turned into a picnic area. The canopies, valencing and spandrels are all painted a brilliant white in contrast with the res waiting-room walls. The station opened in 1885 and closed in 1951.

So, to the Muir of Ord, near Dingwall, where we found the Glen Ord distillery. Here we joined a guided tour (somewhat reminiscent of the recent tour round Harvey's Brewery) where we were told the processes of single malt whisky production. Licensed in 1838, Glen Ord is in an area with an ancient tradition of distilling. It is the last survivor of nine distilleries which operated in this are in Victorian days. The site was originally chosen to be close to a long established meal mill. Agricultural land nearby produces plump, fine barley and up on the moor there is plentiful peat, beside the pure water from two lochs in the hills high above. The whisky is matured in oak casks for 12 years. Our tour took us in and out of the various buildings including that housing the gigantic copper stills, and we also saw distinctive maltings chimneys which are used in symbol form on road signs pointing motorists to distilleries. Our tour was not complete, of course, without the "wee dram" at the end!!

Lastly to Edinburgh, our third and final base of the fortnight, where, with the Scottish branch of the family, we had a walk along the Union Canal, which runs through part of the city. This and the railway both cross the Water of Leith at one point, and a riverside walk took us, at one stage through s brightly-lit tunnel through which a now disused railway used to run.

Photographs of all these exploits, and other places, are available for consultation - please apply to me!

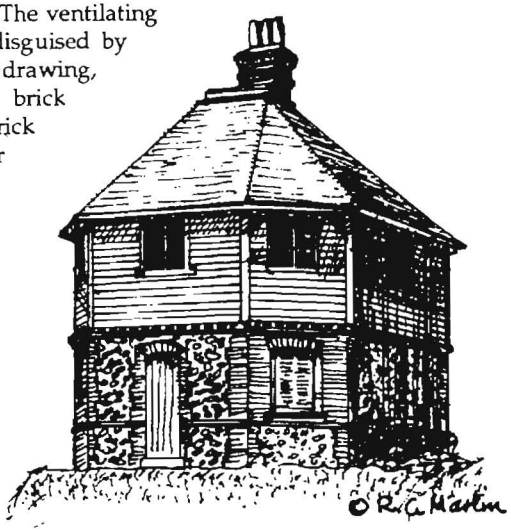
DIANA DURDEN

BRIGHTON SEWERS

Knowing my interest in underground structures, I was invited a few weeks ago to inspect a tunnel which has recently been uncovered during work to the wave splash wall on the Undercliff Walk between Rottingdean and Saltdean. Access was very restricted and luckily I am of slight build but once inside we found ourselves in a tunnel dug into the solid chalk some 1.5 m wide and 2 m high, reducing after 10 m to 1.6 m high. At the end was a fall of material beyond which was exposed the outside of a circular vertical shaft about diameter of which some 4 m was visible. The shaft was built of brickwork in headers and was located about 27 m northwards of the wave splash wall. On checking the location of this tunnel and shaft I realised that it was immediately opposite the former building known as 135 Marine drive at TQ 3750 0209 which was built to disguise the sewer ventilation shaft and what we found was probably this shaft. The building was actually 45 m northwards of the wave splash wall but the shaft could not have ascended vertically above the sewer as it would have surfaced right in the middle of Marine Drive and one must therefore assume that there was a horizontal offset.

The 7-foot diameter brick main sewer was originally built in 1871-74, engineered by Sir John Hawkshaw at a cost of £105,000. It extended 7 miles from Hove Street to the discharge point at Portobello just east of Saltdean. As originally built there was no system of storage for the sewage, apart from the penstock chamber and there was merely a simple valve which prevented the sewage from discharging out to sea when the tide was out. The sewage then

backed up in the sewer towards Brighton. The ventilating shaft at Rottingdean, built in 1885, was disguised by the semi-octagonal building shown in the drawing, with flint rubble ground storey with brick dressings and quoins and a dentilled brick string course at first floor level. The upper storey was timber framed and covered with ship lap boarding. There were timber casements and a pyramidal roof with a small flat top at the top of the vent shaft. There was a chimney stack at the rear. It was used at one time as a mortuary to keep the bodies of ship-wrecked sailors before burial although whether this was a single event ot a frequent occurrence I have not been able to determine. The building was demolished in 1973. Work was carried out to the sewer in the 1930s and inside the tunnel we found some graffiti inscribed "December 1934". The outfall sewer was replaced in 1977 by a new treatment system with a 2,000 yard outfall sewer.



SEWER VENTILATING SHAFT
MARINE DRIVE ROTTINGDEAN

What has never been explained to me why it was necessary to have sixty vents to the sewer when built, but it now works without any. Has anybody got any ideas?

RON MARTIN

COULTERSHAW BEAM PUMP

By the time this appears in print the last open day in 1995 will have passed. As Coultershaw is operated by the society it is appropriate to report to members what has been going on there.

much of the winter the pump was again under water – in fact the peak flood level was noticeably higher than during the Chichester floods of the previous winter – but we did manage to get the essential maintenance done. Some more of the oak starts and paddles on the wheel – rotten after 15 tears intermittent service – were replaced, the penstock sluice was stiffened to minimise distortion and consequent leakage, and the driving pads in the crankshaft flexible coupling were renewed. We have also upgraded some of the display panels. There was a good turnout for the members' working party in March, so that coupled with exterior decoration carried out last autumn the site looked tidy inside and out for the start of the visitor season.

Visitor numbers have not been quite so high as last year but are nonetheless satisfactory. Of course we would always like to have more visitors, so if any members can help by putting up posters or handing out leaflets in their area we will gladly provide the necessary material. Among our visitors was a group from the Solent and Arun branch of the Inland Waterways Association, who apart from coming to see the pump are naturally interested in the Rother

Navigation and have offered help in clearing the lock chamber at Coultershaw. In this context it is worth mentioning that P.A.L. Vine's book on the navigation – *London's lost route to Midhurst* – was published in June on the 200th anniversary of its opening. This is a well researched and illustrated description of its construction, operation and demise and includes a fascinating chapter on the 3rd Earl of Egremont, who financed the navigation himself and built it with his own labour force. For four decades it handled about 12,000 tons of goods per year, with a peak of 17,000 tons. Not surprisingly Petworth Wharf at Coultershaw was the busiest on the navigation.

In spite of the drought the river continued to flow well and there was always enough water to drive the pump; the winter flooding did have its compensations!

We look forward to the reopening of Burton Mill to the public next season, in that we shall both be able to encourage our respective visitors to go along to "the other place just down the road".

Once again I thank all those who come and help to keep the show on the road, either doing maintenance work in the winter or stewarding in the summer, but generally both. Needless to say, more volunteers are always welcome, do let's hear from you, please!

MICHAEL PALMER
(01903 505626)

NEWS FROM AMBERLEY MUSEUM

The Museum's summer season began with a celebration of the locomotive Polar Bear's 90th Birthday. This took place at our Annual Railway Gala Weekend on 8 and 9 July. The locomotive was constructed by Bagnalls in 1905 for the Groudle Glen Railway on the Isle of Man. It was acquired for preservation in the 1960s and came to Amberley when the Brockham collections moved here.

With the completion of its restoration programme at Amberley in 1993, the locomotive returned for the Isle of Man's Year of Railways to join her sister Sea Lion on the restored Groudle Glen Railway – a line that used to serve a zoo.

At Amberley we were pleased to be able to publish a book written by Hugh Ferr Amberley volunteer and SIAS member. Hugh's book traces the history of Machine T from 1540 – 1986 and is reviewed in this edition of SIAS news. It relates to our collection of machine tools, including the 1930s machine shop and is a way of making our collections available to a wider audience. The Trustees have established a publication fund and hope that this will enable more books to be published about our collections.

During the summer work has been continuing on one of our important restoration projects. This is the restoration to running order of 1927 Dennis bus. The Chassis was built by Dennis of Guildford and it had an all aluminium body manufactured by Short Bros of Rochester. It is the only known surviving example of an all metal Short's body and when purchased by the Friends of the Museum, the body was basically sound but without seats. In view of the vehicle's importance, this restoration programme has been aided by a grant from the PRISM fund, administered by the Science Museum in London. The restoration work is now externally complete and the interior will be finished during the winter. The bus will be on display in our bus garage and demonstrated on special occasions.

An interesting recent addition to the Milne Electrical Collection has been a most unusual object mounted on a wooden pole. A round galvanised tank enclosing unidentified electrical apparatus visible through an open access door in the side was at first thought to be a low voltage distribution chamber. Closer inspection has shown it to be an early lightning arrester, as used on electricity distribution systems. It is believed to have been erected by the Royal Engineers during their development of 'Richborough Port' during the First World War. The item was donated and transported to Amberley by Pfizer Limited, who occupy the site at Sandwich where the object originally stood.

ROBERT TAYLOR

EXTRACTS FROM *THE SUSSEX WEEKLY ADVERTISER*

7 February 1791 page 3
River Ouse Navigation ... meeting held 31 January Rt.Hon.Thomas Pelham in the chair ... petition be presented to parliament ... that the trade contribute two-thirds and the lands in the said levels one third the expence of procuring an act and of carrying such into effect. Commissioner of Sewers to be vested with such powers.
Toll not exceeding four pence per ton on all goods upon said river between Lewes and Newhaven. Levy a scot upon the lands."

25 July 1808 page 3
"The new windmill on Church-Hill [Brighton] built by that ingenious millwright Mr Pilbeam was last week set to work. It is reckoned the largest and best construction of its kind, in the kingdom. She drives three pair of stones and it is calculated will grind, upon average twenty loads of wheat per week. She has 12 very stout main posts for her support and carries swifts that measure from the ground to their upper extremity 110 feet. her cost is estimated at four thousand pounds."

In *S.I.H.* 18, 1988 H.T. Dawes gives this exact reference in his chapter 3, where it refers to Hodson's Black Mill in the present West Hill Road. The base of this mill survived until 1966 although the mill itself had been pulled down exactly 100 years earlier on 25 June 1866.

References to Eighteenth Century Mills:-

28 January 1788 page 3
"To be sold by private contract – The tobacco and snuff mill at Hove, consisting of a horse wheel, tobacco engine, mills, floating mill, grindstone, drying stores, mortar, presses, large iron screws in brass boxes, 3 large stones used to grind snuff and all other implements used in manufacture of tobacco and snuff. As they now stand fixed at Hove near Brighthelmstone.
For further particulars enquire of Mr John Smith, Brighthelmstone."

This advert is most intriguing, Hove had brickfields at that date but little in the way of industry; farming and fishing being the principal occupations – and smuggling. Does any member have any more information on this site?

14 January 1788 page 3
To be sold – a quantity of very large older wood now standing near the Paper Mill. Lindfield.
For further particulars enquire of Mrs Pim at the Paper Mill Lindfield.

12 March 1791 page 3

"To be sold by auction – a tide commill with 4 pair of stones, bolters and kiln, stable and cart house. There is a good quay with sufficient water for vessels to load and unload at the mill door. The grinding done at this mill has been accurately averaged at 13 load per week. It is situated in a plentiful corn country surrounded by seaports and excellent markets and is in the occupation of Messrs Rovers and Hill ...

The above premises are freehold and most eligibly situated at Nutbourne in the parish of Westbourne 5 miles from Chichester, 4 from Havant and 13 from Portsmouth."

Nutbourne lies at the head of Thorney Channel one of the network of creeks and channels that constitute Chichester Harbour, this channel separates Thorney Island from the Chichester Peninsular and is still a major corn growing and marketing of grain hereabouts. Defoe in 1724 wrote:-

"This city [Chichester] is not a place of much trade nor is it very populous; but they are lately fallen into a very particular way of managing the corn trade here, which it is said turns very well to account, the farmers generally speaking, carried all their wheat to Farnham to market, which is very near forty miles by land-carriage, and from some ports of the country more than forty miles. But some monied men of Chichester, Emsworth, and other places adjacent have joined their stocks together, built large granaries near the crook, where the vessels come up and here they buy and lay up all the corn which the country on that side can spare; and having good mills in the neighbourhood they grind and dress the corn and send it to London in the meal about by Long Sea, as they call it."[1]

A century later, Cobbett, travelling from Petworth to Fareham passed through this same country and a few miles west of Nutbourne noted

"It is impossible that there can be anywhere, a better corn country than this...the land is excellent...the spot the earliest in the whole kingdom. Here if the corn were backward, then the harvest must be backward."[2]

The area of the West Sussex coastal plain with its great corn crops growing on warm, deep, brickhearth soils abounded with both windmills and tidemills and the food processing industries allied with corn – malting, brewing, baking. It is a symbol of the country's industrial decline that although the corn still grows the processing is but a shadow of its earlier dominance.

1. Daniel Defoe - *A tour through the whole island of Great Britain* 1724 (Penguin 1971)
2. William Cobbett - *Rural Rides* 1830 (Everyman 1912)
J.H. Andrews, "The port of Chichester and Grain Trade" 1650-1750 *SAC* Vol 22

GEOFFREY MEAD

NEWSLETTER MANAGEMENT

Will all contributors (and potential contributors) please note that I will be relinquishing this task with the publication of this *Newsletter* No.88. Bob Allen has kindly consented to take on this responsibility from me and therefore all contributions (and may there be many of them!) should be sent to R.E. Allen, 7A Heathfield Road, Seaford, East Sussex BN25 1TH (01323 - 896724) for the January *Newsletter* and thereafter.

GORDON THOMERSON

INDUSTRIAL ARCHAEOLOGY REVIEW, Autumn 1994, Vol. XVII No.1

Articles

Book Reviews

BOOK REVIEWS

Hugh Fermer, *Machine Tools – A History 1540 - 1986* Amberley Museum 1995, pp84 (with 59 illus)., £4.95 plus 75p p&p from Amberley Museum, Houghton Bridge, Amberley, West Sussex BN18 9LT. ISBN 0 9519329 1 8

The introduction sets the scene for the use of powered tools from B.C. through to the needs of the early clockmakers in the Middle Ages. Machine tool development progressed to satisfy the growing requirements of clockmakers, cannon boring and later the steam engine, this being well covered with references to many of the principal figures in these fields such as Maritz, Verbruggen, Newcomen, Watt, Wilkinson etc. The acceleration in development due

to the Industrial Revolution and the manner in which this differed somewhat between Britain and American is noted. The production of Small Arms in particular appears to have had a distinct influence on the needs of mass production in the USA with the requirement for specialised milling and turning equipment.

Grinding, shaping, boring and gear cutting processes are all covered and the many illustrations make for easier understanding particularly for those who may not have first hand knowledge of the subject. The development of special tool steels and tungsten carbide cutters and the ability to produce more accurate parts leads us into the modern era where more complex and extremely precise machines are required.

The author has managed to translate his experiences as an R.A.F. apprentice, and knowledge as an engineer in the machine tool industry, into a book, readable by both the layperson and those perhaps more versed in the subject. It is well illustrated and at an attractive price.

In the museum one can actually see some of the types of machine described, in their workshop which illustrates a typical 'jobbing shop' of the 1920s. In addition of course you may also purchase the book.

TED HENBERY

SUSSEX MILLS GROUP

NOTES FROM THE SECRETARY

MILLS FOR SALE

Patcham Windmill, Brighton

A brick tower mill built in 1884 and ground corn up to 1924 and was sold in 1928 for £50. Those were the days.

It is now converted into a dwelling with an extension on the side. Some machinery is in place but all roms are in use as part of the living accommodation. Asking price is £350,000. For further details contact Alliance & Leicester, Dyke Road, Brighton (01273 559791)

Henfield Mill

With reference to the mill in the attached article by Guy Blythman the Mill House with granary is up for sale. Asking price £325,000. Further details from Hamptons on 01403 211766

NEWS OF MILLS

Michelham Priory Water Mill

The mill is in a sorry state as I saw on a visit in August. The gear teeth were chewed up and thus the wheel unable to turn, making the grinding of corn impossible. Thus it was of no surprise that I received an appeal for funds. The Friends under the title of The Molly Pearce Memorial Fund have launched a fund for £50,000. This is for a replacement wheel and works. The breakdown of pricing is of interest:-

Cast and fit new iron water wheel	£19,000
Cast and fit new wallower including 105 teeth at £9 each	£5,900
Repair and reline race and adjust to fit new wheel	£3,800
New iron shaft and fittings	£7,600
Cast and fit new iron pitwheel	£6,300

They have decided to fit a cast iron water wheel in place of the existing wooden wheel. There as a cast iron wheel at the mill at one time and a similar one would last longer and be more efficient than a new wooden one. We meet there for our October meeting so the problem will be seen at first hand.

Blackdown or Cherry Clack or Punnets Town Mill

Following the death of Archie Dallaway last year I am pleased to report that the mill was left in his will to his relations Mr. & Mrs. Tasker and that they have now joined Sussex Mills Group. They intend to keep the mill an retain it in its present condition. Thus an important mill has been saved for the future.

Bodiam Mill

Nothing remains of the actual water mill building except for the water wheel. The milelr's house remains and the present owner, John Dines, has plans to restore the water wheel to its original condition. Frank Gregory and I went to discuss the project with John Dines and by the time this is published a working party will have been there to clear the wheel pit. Mr. Dines has produced drawings and estimayes of the new wheel – mainly wood with a wooden shaft. The total estimated weight is 3450 kg or 3.36 tons to you and me. The cost of materials alone including VAT is approaching £12,000

Shirley Mill, Croydon, Surrey

This mill is now open to the public for the first time in 140 years so I amtold by Maurice [illegible]rence one of our members who is also a Friend of Shirley Mill. They are also appealing for [illegible]ds or rather advice on how to appeal for funds. Any suggestions?

MILLSTONES

The following articles have been brought to my notice recently and could be of interest to members:-

"Millstones, Quarries and Millstone-Makers" by D.G. Tucker in *The Journal for Post Medieval Archaeology* Vol.11 1977 pp 1-21 plus 9 pages of photographs.
This has been rewritten and updated in "Millstone making in England" by D.G. Tucker in *Industrial Archaeology Review* Vol.XI 2 Spring 1987.

Also in the first mentioned journal is an article "An Operational Fulling Mill at Kirha-Divan in the Central Anatolian Plateau, Turkey" by H.H. Gunham Danisman pp 80-86 plus

photographs. This is cited as an example of primitive construction which may afford parallels with medieval and post-medieval fulling mills in Great Britain.

"Millstones that mapped the Mediterranean" by Olwen William-Thorpe and Richard Thorpe in the *New Scientist* 23 February 1991 pp 42-45

DON COX

THE T.I.M.'S SWEDISH MILL TOUR July 1995

How do you organise 34 avid molinologists to visit 78 windmills, 6 watermills and 3 horsegears, catch six ferries and travel 1800 km by coach without a single hitch? Ask Varis Bokalders the Swedish T.I.M.'s member because he managed it perfectly and threw in glorious weather as a bonus. From beginning to end the eight day tour was a sheer molinological delight – tiring and expensive – yes but all very worthwhile. Films we loaded faster than a six-shooter at a Wild West show and cameras were steaming at the end of each day! From ancient to modern, conventional to bizarre, we saw them all. Starting with a tour of the Stockholm area including the three mills at the Skansen open air museum, the Prins Eugens giant sail-less oil mill and several Dutch type smock mills plus Poltrok mills we then took the ferry from Grieslehamn to the Finnish island of Aland. Here we spent three days looking at the abundance of, primarily, post mills with the occasional hollow post mill and smock mill. The four examples at the Jan Karlsgarden open air museum were extremely interesting comprising two post mills, a smock saw mill and a hollow post mill. Here also we were able to examine a horizontal water wheel and a horse gear used for threshing. An afternoon trip across the water to Enklinge island proved most worthwhile with seven sites to visit. Only one had a fully restored post mill the remainder varying in their state of dereliction but including one sorry looking log cabin type constructed post mill standing on the shore-line and a sunken post mill. Back on Aland, at Torp we saw what must have been an extremely busy mill in its day capable of grinding wheat, sawing logs, cutting shingles and crushing seed. Before returning to the mainland we called at the fully operable post mill at Bovik though with the lack of wind it was man power rather than wind power which succeeded in getting the 'wings' (the Swedish term) turning. Returning to Sweden we journeyed south and visited two variations on the Dutch smock mill design and a post mill where the trestle was entirely encased by wooden shingles. The overnight ferry from Nynashamn took us to Gotland where having disembarked at 5.30 a.m. we were exploring the old walled town by 6.45 a.m. and visiting the three mills which overlook the harbour by 8.00 a.m.! This was to be a very full day and by the time we reached our hotel at 9.30 p.m. had seen examples of all three types of windmills, a 6 metre water wheel, undershot and turning for us, and at the Bunge open air museum a strange looking triangular shaped six sailed saw mill, a fascinating small wind powered workshop capable of driving a miniature pair of stones, a saw, a lathe and a potato crusher, an 8-sided log-cabin style smock mill, a water powered saw mill, a corn grinding water mill and a fulling mill plus a horse gear. The day was rounded off by an evening visit to see Willy Bolin – a true mill enthusiast – and his lovely post mill. An added bonus was the chance to sample his own brew of 'Aqua Vita'. What a perfect way to end the day! The remaining two days on Gotland were equally filled with milling delights with a completely rebuilt tower mill, post mills with their trestles encased in stone, a giant Dutch smock mill now incorporated in an industrial milling complex, two stone quarries served by skeletal wind pumps, a smock mill erected on a tall brick building looking for all the world a relation of West Blatchington, and finally two examples of the sunken post mill. Many of the mills had on display different forms of the early querns and at the other end of the milling time scale we saw several of the modern

wind generators so that by the time our tour drew to a close we had seen milling in all its forms and developments through the centuries. The machinery, methods of tentering, winding, sifting and stone dressing varied considerably and just added to our enjoyment. As we boarded the 6.30 a.m. ferry back to the mainland and Stockholm it was unanimously agreed that we had all O.D'd on mills but without a doubt it had been a superb experience that would take a lot of beating.

PETER HILL

SOME MILLS ITEMS FROM *THE SUSSEX WEEKLY ADVERTISER*

Vol.15, No.1 January 1941
"Regulation of Speed in a Windmill"

The above article by Maud Montagu Bruce is a four page piece with seven illustrations of sweeps and their mechanisms taken at Earnley Mill Selsey and Drapers Mill, Silverhill, St. Leonards. There are examples of Common Sails stretched and reefed and the patent self-reefing sweep plus a spring sweep. Bexhill mill and Icklesham mill are referred to in the text. As a 'non-mills' person I found it an interesting piece with some lovely bits of trivia – canvas sails can generate over 30 horse-power.

In the following number February 1941 in the 'Written by Readers' section is a piece by the celebrated historian Edmund Austen of Brede entitled "Water Mill Wheel, Beckley Furnace" – The photograph of the water mill at Beckley Furnace (see p55 [of this number]) was recently taken by Mr. W. C. Hewett of Rye. The water mill was built soon after the closing down of the iron works at Beckley Furnace, towards the end of the eighteenth century. It was owned and worked by three generations of the Miller family. Unfortunately the mill was totally destroyed by fire on 15th April 1909. The present owner of the property Mr. Albert Johnson (grandson of the late Mr. Tilden Miller) appears in the photograph."

Vol.14 No.11, November 1940
"Lost Mills of the Upper Ouse" by R. T. Mason

Charting the many and varied tributaries which make up the drainage basin of the Upper Ouse this article traces mills and furnaces from Slaugham in the west, clockwise through Blackfold Furnace, Balcombe Mill, Strudgate Furnace, Chittingly Furnace down to Horsted Keynes mill, Cockhaise Mill and Sheffield Forge. Much of this was based on notes collected by Ernest Straker and on his book *Wealden Iron*. There are many references within this to the canalising and locking system on this stretch of the river.

Vol.15 No.11, November 1941
"The Old Windmills of Lewes" – H.E.S. Simmons p342

This is a large (12 page) article with illustrations of "Southern Mill Lewes, one of a pair popularly known as Kingston Mills", Kingston Smock Mill base, Ashcombe Mill blown down 1916, Smarts Mill and a later photo of the base of Smarts Mill, and a photo of the house built from the Round House of Malling mill.

This is a well written detailed piece with many facts derived from county newspapers, deeds and documents of the eighteenth and nineteenth centuries.

Following this is a regular column "A Countrymans Diary" by the Rev. A.A. Evans, which concerns the tide mills of the county. Photos of Slipper Mill, Emsworth Creek (NOT the Hampshire mill which faced it from the next county). A drawing of Bishopston (sic) Tide Mill, a photo of Birdham Tidal Mill and an interior photo of the Slipper Mill. The author acknowledges the help of Alex Wailes, Euston Road, London in preparing the article.

GEOFFREY MEAD

FORTHCOMING PUBLICATION
The Watermills of Sussex Volume 1 – East Sussex by Derek Stidder

In the Autumn of 1996, Quotes Ltd will be publishing Volume 1 of *The Watermills of Sussex*. This volume will chronicle the history of the 95 watermills which formerly worked in East Sussex. Volume 2 on West Sussex will follow soon after.

The book will be hard backed and of approximately 50,000 words together with maps, diagrams and at least 125 photographs, many of which were taken at the turn of the century. The book will be published as a limited edition with numbered copies available if ordered in advance.

At the present time there are at least thirteen books in print on windmills in the County but none on watermills. The book will be based on a similar format to the author's previous book *The Watermills of Surrey*, which was published in December 1990.

LOST WINDMILLS OF SUSSEX
New Mill, Henfield (TQ 217155)

Henfield New Mill, as it was called to distinguish it from another, older post mill in the village, was built around 1820. In 1827 the owner was Richard Gates and the tenant miller Robert Stevens. Stevens later succeeded to ownership of the property, the first in a series of tenants to do so. He employed a Mr. Barringer as miller from about 1850. By 1863 Barringer was the owner and his miller was Stephen Gardiner, who himself came into possession a few years later.

In 1844, like a number of other Sussex post mills in the mid-nineteenth century, Henfield underwent considerable modification. Patent sails and a fantail were fitted, and whe previously it had two pairs of stones it now became a three-pair mill with two pairs in the breast, underdriven by spur gearing, beside the one in the tail. A number of wooden or largely wooden components, such as the tentering gear, were reworked in iron. In these modifications the mill benefited from the presence locally of the millwright James Neale, later of Neale and Cooper, who carried out the work as an inscription on the massive casting supporting the crown tree testified. As a result of it Henfield mill can be said along with such as Cross-in-Hand to represent the peak of technical advancement attained by Sussex windmills.

After two steam mills were built in the village, the first in c.1860 and the second by 1874, the windmill's working days were numbered. It ceased to grind regularly in 1885, although it was brought back into use for a short period two years later, the miller being Charles Packham who at one time operated Cobb's watermill at Sayers Common, happily still with us today.

From then on deterioration must have been a gradual process, for at some date the bin floor was converted into a pigeon loft, ventilation being provided by a louvred structure on the roof which rather spoilt the building's appearance. The mill had become visibly derelict by the 1930s, and during the Second World War it was badly treated by the Home Guard, who used it as an observation post; the roundhouse walls were pulled down and the body reduced to near-skeleton condition. This damage eventually led to its demolition, in October 1953. In the following January an account of this event appeared in the *Sussex County Magazine*:

"On Wednesday 21st October 1943 ... (Henfield mill) was pulled down ... It had been in a bad state of repair for early 20 years ... A fire on Good Friday, 7th April 1950, although quickly extinguished, made the mill's fate even more certain. The gradual falling of the weatherboards lessened the wind resistance and probably gave it a little longer life. It formerly belonged to the late Mr. Tobit and at the last to Mr. C.H. White of Holedean Farm, who in May last advertised the mill for sale, to be demolished; a buyer could not be found, so finally it was advertised to be sold at Steyning ... it failed to sell under the hammer and was sold by private treaty the next day. The work of removing movable parts began almost immediately to make it ready for the final overthrow by its purchaser, Mr. Hatcher of Brighton. At about 11 a.m. on the day a wire rope was attached to a lorry and to the support of the centre post nearest the school which had been weakened by chopping with an axe. After several pulls the mill still proved its strength by remaining firm, causing the rope to break; after a third attempt the support broke away but the mill still remained upright. Next came the turn of the support nearest the church. The same preparation took place; it stubbornly resisted the lorry's efforts to move it but finally it yielded. When it did, all the weight of the centre post rested on the horizontal beams in the form of a cross. These, having been weakened by exposure to the weather, gave way and the mill collapsed to the ground at 11.31 a.m. After nightfall fire again destroyed practically all the woodwork."

The fires before and after demolition suggest attempts on the part of the owners to be rid of the structure as soon as possible.

Henfield's demise left High Salvington as the only post mill remaining in Sussex west of a line running north-south from the Surrey border to Hove.

Fortunately detailed notes of the mill's construction and workings were made by molinologists such as Denis Saunders and Stanley Freese during visits to it in the 1930s and . It was a large one and had been extended at the tail by 4 feet 3 inches. The post wa in four quarters; it bore the date 1859 and therefore had probably been replaced in that year. The brick roundhouse appeared to be single-storey but actually had two storeys, the lower one being partly below ground level. There were four double-shuttered patent sails, all of which had gone by the end of the mill's life along with the striking chain wheel and weight box (the latter mounted on the tail of the mill to the right of the door) and most of the fantail assembly. The sails were mounted on an iron windshaft which had four small ribs along its length. The brakewheel was an all-wood clasp-arm, with a large wooden pulley in front of it from which the sack hoist was driven; the tailwheel also appears to have been wooden, although latterly most of it was missing. The wallower, upright shaft and great spur wheel were of iron. Each pair of stones had its own set of governors, driven by belts from the stone spindles. The iron bridge trees were suspended from the crowntree on iron brackets. There were two flour dressers, both driven from the tail wheel via a set of bevel gears.

GUY BLYTHMAN